

December 20, 2004

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555-0001

Subject: **Docket No. 50-361**
Licensee Event Report No. 2004-004
San Onofre Nuclear Generating Station, Unit 2

Gentlemen:

This submittal provides Licensee Event Report (LER) 2004-004 for an automatic actuation of the Reactor Protection System that resulted when the main generator tripped due to an electrical ground on Phase "A" of the generator Isophase Bus.

Any actions listed are intended to ensure continued compliance with existing commitments as discussed in applicable licensing documents; this LER contains no new commitments. If you require any additional information, please so advise.

Sincerely,

Raymond Waldo

LER No. 2-2004-004

cc: B. S. Mallett, NRC Regional Administrator, Region IV
C. C. Osterholtz, NRC Senior Resident Inspector, San Onofre Units 2 & 3

NRC FORM 366 (7-2001)		U.S. NUCLEAR REGULATORY COMMISSION		APPROVED BY OMB: NO. 3150-0104		EXPIRES: 06/30/2007							
LICENSEE EVENT REPORT (LER) <small>(See reverse for required number of digits/characters for each block)</small>				<small>Estimated burden per response to comply with this mandatory information collection request: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to bis@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.</small>									
1. FACILITY NAME San Onofre Nuclear Generating Station (SONGS) Unit 2				2. DOCKET NUMBER 05000-361		3. PAGE 1 OF 1							
4. TITLE Automatic Reactor Trip Due to Electrical Ground on Main Generator Isophase Bus													
5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED				
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER			
11	19	2004	2004-004-00			12	20	04		05000-361			
9. OPERATING MODE 1			11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR II: (Check all that apply)										
10. POWER LEVEL 100			20.2201(b)			20.2203(a)(3)(ii)			50.73(a)(2)(ii)(B)			50.73(a)(2)(ix)(A)	
			20.2201(d)			20.2203(a)(4)			50.73(a)(2)(iii)			50.73(a)(2)(x)	
			20.2203(a)(1)			50.36C(1)(i)(A)			<input checked="" type="checkbox"/> 50.73(a)(2)(iv)(A)			73.71(a)(4)	
			20.2203(a)(2)(i)			50.36C(1)(ii)(A)			50.73(a)(2)(v)(A)			73.71(a)(5)	
			20.2203(a)(2)(ii)			50.36C(2)			50.73(a)(2)(v)(B)			OTHER Specify in Abstract below or in NRC Form 366A	
			20.2203(a)(2)(iii)			50.46(a)(3)(ii)			50.73(a)(2)(v)(C)				
			20.2203(a)(2)(iv)			50.73(a)(2)(i)(A)			50.73(a)(2)(v)(D)				
			20.2203(a)(2)(v)			50.73(a)(2)(i)(B)			50.73(a)(2)(vii)				
			20.2203(a)(2)(vi)			50.73(a)(2)(i)(C)			50.73(a)(2)(viii)(A)				
20.2203(a)(3)(i)			50.73(a)(2)(ii)(A)			50.73(a)(2)(viii)(B)							
12. LICENSEE CONTACT FOR THIS LER													
NAME R. W. Waldo, Station Manager, Nuclear Generation						TELEPHONE NUMBER (Include Area Code) 949-368-8725							
13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT													
CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX		CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX			
				N									
14. SUPPLEMENTAL REPORT EXPECTED						15. EXPECTED SUBMISSION DATE		MONTH DAY YEAR					
YES (If yes, complete EXPECTED SUBMISSION DATE)				<input checked="" type="checkbox"/> NO									
16. ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)													
<p>On 11/19/2004 at about 800 PST, Unit 2 was at about 100 percent power when the main generator [EL] and turbine [TA] tripped, and the reactor [R] automatically tripped. The Auxiliary Feedwater System [BA] actuated as designed. SCE reported this event to the NRC (Log No. 41209) at 0925 PST as required by 10CFR50.72(b)(2)(iv)(B). This follow-up report satisfies 10CFR50.73(a)(2)(iv)(A).</p> <p>The main generator isophase bus includes two de-ionizing filters [FLT], between phases, to reduce the likelihood of a phase-to-phase short circuit. This event resulted when several vanes of the filters failed (metal fatigue) and shorted the "A" phase to ground; protective circuits tripped the generator.</p> <p>During the 4/2004 refueling outage, SCE replaced the generator terminal box, and replaced these filters during that work. SCE determined the replacement filters failed due to use of a lower strength aluminum alloy and a vane/frame connection that caused stress risers. Prior to restarting the Unit, SCE installed new de-ionizing filters that have thicker vanes, use a stronger aluminum alloy, and eliminate vane/frame connection stress risers.</p> <p>Plant protective equipment functioned as designed. There was no safety significance to this event because it is bounded by the existing plant safety analysis (UFSAR 15). In the past 3 years SCE has not reported any events caused by failed de-ionizing filters.</p>													